

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	7	"670979".ap.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/21 14:41
L2	125	(380/256).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/21 14:45
L3	0	(359/109).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/21 14:45
L4	0	(359/195).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/21 14:50
L5	2	"7181011".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/21 14:55
L6	480	(380/278).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/21 14:56
L7	250	(380/283).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/21 15:01

EAST Search History

L8	9	2 and reflect\$4 and quantum and (faraday mirror)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	OFF	2007/03/21 15:03
L9	0	2 and reflect\$4 and quantum and (faraday mirror) and (single-photon detecor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	OFF	2007/03/21 15:04
L10	0	2 and (single-photon detecor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	OFF	2007/03/21 15:04
L11	0	(single-photon detecor) and (radiation pulse)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	OFF	2007/03/21 15:05
L12	0	(two-way quantum key or QKD) and (a phase modulator) and (a Farady mirror) and (a controller) and (a single-photon detector)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2007/03/21 15:10
L13	19	Trifonov-alexei.in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/03/21 15:11
S1	291	(380/278).CCLS.	USPAT; USOCR	OR	OFF	2006/11/08 13:35
S2	444	(380/278).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/08 13:35

EAST Search History

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S4	4	S3 and (phase modulator) and (faraday mirror) and (single-photon) and (beamsplitter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/11/09 10:57
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S6	51	reflect\$4 and quantum and (faraday mirror)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	OFF	2007/03/21 15:02
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S8	1	"7006635".pn.	USPAT	OR	OFF	2006/11/08 20:14
S9	3	"384822".ap.	USPAT	OR	OFF	2006/11/08 20:14

EAST Search History

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EAST Search History

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S15	2	"6272224".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/11/09 11:13
S16	2	"5953421".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/11/09 11:20
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S19	1	"5663793".pn.	USPAT	OR	OFF	2006/11/09 11:23
S20	1	"5086349".pn.	USPAT	OR	OFF	2006/11/09 11:24
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S29	17	Hitherto and single-photon	USPAT	OR	OFF	2006/11/09 14:09
S30	1	"6438234".pn.	USPAT	OR	OFF	2006/11/09 14:10
S31	3	"971077".ap.	USPAT	OR	OFF	2006/11/09 21:47



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Rele

1 [Miscellany: Quantum cryptography in practice](#)

Chip Elliott, David Pearson, Gregory Troxel

August 2003 **Proceedings of the 2003 conference on Applications, technologies, architectu protocols for computer communications SIGCOMM '03**

Publisher: ACM Press

Full text available: [pdf\(809.93 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citings](#), [index t](#)

BBN, Harvard, and Boston University are building the DARPA Quantum Network, the world's first delivers end-to-end network security via high-speed Quantum Key Distribution, and testing that against sophisticated eavesdropping attacks. The first network link has been up and steadily op laboratory since December 2002. It provides a Virtual Private Network between private enclave traffic protected by a weak-coherent implementation of quantum cryptogra ...

Keywords: IPsec, cryptographic protocols, error correction, key agreement protocols, privacy ; quantum cryptography, quantum key distribution, secure networks

2 [Special section on impact of quantum technologies on networks and networking research:](#)

[noise: protected data encryption for WDM fiber-optic networks](#)

Eric Corndorf, Chuang Liang, Gregory S. Kanter, Prem Kumar, Horace P. Yuen

October 2004 **ACM SIGCOMM Computer Communication Review**, Volume 34 Issue 5

Publisher: ACM Press

Full text available: [pdf\(696.74 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We demonstrate high data-rate quantum-noise-protected data encryption through optical fibers coherent states of light. Specifically, we demonstrate 650Mbps data encryption through a 10Gb bearing, in-line amplified 200km-long line. In our protocol, legitimate users (who share a short communicate using an M-ry signal set while an attacker (who does not share the secret-key) is contend with the fundamental and irreducible quantum-measurement noise of coherent stat ...

Keywords: data encryption, quantum cryptography

3 [Special section on impact of quantum technologies on networks and networking research:](#)

[for the quantum internet](#)

Seth Lloyd, Jeffrey H. Shapiro, Franco N. C. Wong, Prem Kumar, Selim M. Shahriar, Horace P. Yuen

October 2004 **ACM SIGCOMM Computer Communication Review**, Volume 34 Issue 5

Publisher: ACM Press

Full text available:  [pdf\(726.84 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

A team of researchers from the Massachusetts Institute of Technology (MIT) and Northwestern is developing a system for long-distance, high-fidelity qubit tele-transportation. Such a system will be used when future quantum computers are to be linked together into a quantum Internet. This paper presents progress that the MIT/NU team has made, beginning with a review of the teleportation architecture and a loss-limited performance analysis.

Keywords: entanglement, quantum communication, quantum memory, qubits, teleportation

4 **A Quantum Logic Array Microarchitecture: Scalable Quantum Data Movement and Computation**

Tzvetan S. Metodi, Darshan D. Thaker, Andrew W. Cross

November 2005 **Proceedings of the 38th annual IEEE/ACM International Symposium on Microarchitecture MICRO 38**

Publisher: IEEE Computer Society

Full text available:  [pdf\(394.90 KB\)](#) 

Additional Information: [full citation](#), [abstract](#), [index terms](#)

[Publisher Site](#)

Recent experimental advances have demonstrated technologies capable of supporting scalable quantum computation. A critical next step is how to put those technologies together into a scalable, fault-tolerant system that is also feasible. We propose a Quantum Logic Array (QLA) microarchitecture that forms the foundation of such a system. The QLA focuses on the communication resources necessary to efficiently perform fault-tolerant computations. We leverage the extensive groundwork in quantum error correction and quantum circuit synthesis.

5 **Level set and PDE methods for computer graphics**

 David Breen, Ron Fedkiw, Ken Museth, Stanley Osher, Guillermo Sapiro, Ross Whitaker
August 2004 **ACM SIGGRAPH 2004 Course Notes SIGGRAPH '04**

Publisher: ACM Press

Full text available:  [pdf\(17.07 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [citations](#)

Level set methods, an important class of partial differential equation (PDE) methods, define dynamics implicitly as the level set (iso-surface) of a sampled, evolving nD function. The course begins with material that introduces the concept of using partial differential equations to solve problems in computer graphics, geometric modeling and computer vision. This will include the structure and behavior of different types of differential equations, e.g. the level set equation.

6 **Leveraging Optical Technology in Future Bus-based Chip Multiprocessors**

Nevin Kirman, Meyrem Kirman, Rajeev K. Dokania, Jose F. Martinez, Alyssa B. Apsel, Matthew A. Vukobratovic, H. Albonesi

December 2006 **Proceedings of the 39th Annual IEEE/ACM International Symposium on Microarchitecture MICRO '06**


Publisher: IEEE Computer Society

Full text available:  [pdf\(589.69 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [index terms](#)

Although silicon optical technology is still in its formative stages, and the more near-term applications for on-chip communication, rapid advances have been made in the development of on-chip optical interconnects. In this paper, we investigate the integration of CMOS-compatible optical technology to on-chip interconnect buses in future CMPs. While not exhaustive, our investigation yields a hierarchical opto-electronic architecture that exploits the advantages of optical technology while abiding by the constraints of silicon technology.

7 **Spatial augmented reality: a modern approach to augmented reality: Modern approaches to reality**

 Oliver Bimber, Ramesh Raskar

July 2005 **ACM SIGGRAPH 2005 Courses SIGGRAPH '05**

Publisher: ACM Press

Full text available:  pdf(48.93 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This tutorial discusses the Spatial Augmented Reality (SAR) concept, its advantages and limitations, present examples of state-of-the-art display configurations, appropriate real-time rendering techniques about hardware and software implementations, and current areas of application. Specifically, it techniques for optical combination using single/multiple spatially aligned mirror-beam splitters, transparent screens and optical holograms. Furthermore, ...

8 The elements of nature: interactive and realistic techniques



Oliver Deussen, David S. Ebert, Ron Fedkiw, F. Kenton Musgrave, Przemyslaw Prusinkiewicz, Doug L. Stam, Jerry Tessendorf

August 2004 **ACM SIGGRAPH 2004 Course Notes SIGGRAPH '04**

Publisher: ACM Press

Full text available:  pdf(17.65 MB)

Additional Information: [full citation](#), [abstract](#)

This updated course on simulating natural phenomena will cover the latest research and production techniques for simulating most of the elements of nature. The presenters will provide movie production, interactive simulation, and research perspectives on the difficult task of photorealistic modeling, rendering, and animation of natural phenomena. The course offers a nice balance of the latest interactive graphics hardware simulation techniques and the latest physics-based simulation techniques ...


9 Seeing, hearing, and touching: putting it all together



Brian Fisher, Sidney Fels, Karon MacLean, Tamara Munzner, Ronald Rensink

August 2004 **ACM SIGGRAPH 2004 Course Notes SIGGRAPH '04**

Publisher: ACM Press

Full text available:  pdf(20.64 MB)

Additional Information: [full citation](#)


10 The APL theory of human vision



Gérard A. Langlet

August 1994 **ACM SIGAPL APL Quote Quad , Proceedings of the international conference on language and its applications: the language and its applications APL '94**, Volume 1

Publisher: ACM Press

Full text available:  pdf(1.89 MB)


Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#), [reviews](#)

11 Optical interconnection technology in the telecommunications network

Davis H. Hartman

November 1986 **Proceedings of 1986 ACM Fall joint computer conference ACM '86**

Publisher: IEEE Computer Society Press

Full text available:  pdf(1.85 MB)

Additional Information: [full citation](#), [references](#), [index terms](#)

12 Exploiting perception in high-fidelity virtual environments: Exploiting perception in high-fidelity environments



Additional presentations from the 24th course are available on the citation page

Mashhuda Glencross, Alan G. Chalmers, Ming C. Lin, Miguel A. Otaduy, Diego Gutierrez

July 2006 **ACM SIGGRAPH 2006 Courses SIGGRAPH '06**

Publisher: ACM Press

Full text available:  pdf(5.07 MB)  mov

Additional Information: [full citation](#), [abstract](#), [references](#)

(68:6 MIN)

The objective of this course is to provide an introduction to the issues that must be considered in high-fidelity 3D engaging shared virtual environments. The principles of human perception guide development of algorithms and techniques in collaboration, graphical, auditory, and haptic rendering to show how human perception is exploited to achieve realism in high fidelity environments with constraints of available finite computational resources. In this course we ...

Keywords: collaborative environments, haptics, high-fidelity rendering, human-computer interaction, user, networked applications, perception, virtual reality

13 Optical interconnect technology developments (invited paper)

L. D. Hutcheson

November 1986 **Proceedings of 1986 ACM Fall joint computer conference ACM '86**

Publisher: IEEE Computer Society Press

Full text available:  [pdf\(859.23 KB\)](#)


Additional Information: [full citation](#), [references](#), [index terms](#)

14 Itinerant delivery of popular data via WIDE hot spots

Sinan Isik, Mehmet Yunus Donmez, Cem Ersoy

April 2006 **Mobile Networks and Applications**, Volume 11 Issue 2

Publisher: Kluwer Academic Publishers

Full text available:  [pdf\(1.07 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Wireless Information Delivery Environment (WIDE) is a distributed data dissemination system, using IEEE 802.11b technology. WIDE aims to deliver popular information services to registered mobile WLAN hot spots. Data delivery is based on broadcasting and multicasting to provide scalability and use of the wireless channel. Reliability is assured with a combination of Forward Error Correction, carousel, and ARQ techniques. This paper presents the proposed system ...

Keywords: reliable and secure data dissemination, wireless LANs, wireless hot spots


15 A survey of image registration techniques



Lisa Gottesfeld Brown

December 1992 **ACM Computing Surveys (CSUR)**, Volume 24 Issue 4

Publisher: ACM Press

Full text available:  [pdf\(5.20 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Registration is a fundamental task in image processing used to match two or more pictures taken, for example, at different times, from different sensors, or from different viewpoints. Virtually all large-scale image processing applications which evaluate images require the registration of images, or a closely related operation, as an initial step. Specific examples of systems where image registration is a significant component include target tracking with a real-time image of a scene for target recognition, motion ...

Keywords: image registration, image warping, rectification, template matching

16 Special section on impact of quantum technologies on networks and networking research: quantum networks: from quantum cryptography to quantum architecture



Tatjana Curcic, Mark E. Filipkowski, Almadena Chelkanova, Philip A. D'Ambrosio, Stuart A. Wolf, Foster, Douglas Cochran

October 2004 **ACM SIGCOMM Computer Communication Review**, Volume 34 Issue 5

Publisher: ACM Press

Full text available:  [pdf\(221.26 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#)

As classical information technology approaches limits of size and functionality, practitioners are new paradigms for the distribution and processing of information. Our goal in this Introduction is a broad view of the beginning of a new era in information technology, an era of quantum information technology, previously underutilized quantum effects, such as quantum superposition and entanglement, are resources for information encoding and processing. The ability to ...


17 Are crossbars really dead?: the case for optical multiprocessor interconnect systems



Andreas G. Nowatzky, Paul R. Prucnal

May 1995 **ACM SIGARCH Computer Architecture News , Proceedings of the 22nd annual symposium on Computer architecture ISCA '95**, Volume 23 Issue 2

Publisher: ACM Press

Full text available:  [pdf\(1.16 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


Crossbar switches are rarely considered for large, scalable multiprocessor interconnect systems require $O(n^2)$ switching elements, are difficult to control efficiently and are hard to implement or become too large to fit on one integrated circuit. However these problems are technology dependent. Recent innovation in fiber optic devices has led to a new implementation of crossbar switches that share these problems while retaining the full advantages ...

18 Hip, hype and hope—the three faces of virtual worlds (panel session)



Bob Jacobson, John Barlow, Esther Dyson, Timothy Leary, William Bricken, Warren Robinett, Jaron August 1990 **ACM SIGGRAPH 90 Panel Proceedings SIGGRAPH '90**

Publisher: ACM Press

Full text available:  [pdf\(5.03 MB\)](#)


Additional Information: [full citation](#), [index terms](#)

19 Hunting hurricanes

C. Wayne Wright, Edward J. Walsh

February 1999 **Linux Journal**

Publisher: Specialized Systems Consultants, Inc.

Full text available:  [html\(35.54 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

The authors tell us about hunting hurricane using the Scanning Radar Altimeter based on the Lidar analyzing the data with Yorick


20 Thermal issues in disk drive design: Challenges and possible solutions



Sudhanva Gurumurthi, Anand Sivasubramanian

February 2006 **ACM Transactions on Storage (TOS)**, Volume 2 Issue 1

Publisher: ACM Press

Full text available:  [pdf\(2.14 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

The importance of pushing the performance envelope of disk drives continues to grow in the enterprise market. One of the most fundamental factors impacting disk drive design is heat dissipation, which affects drive reliability. Until now, drive manufacturers have continued to meet the 40% target of the internal data-rates (IDR) by increasing RPMs and shrinking platter sizes, both of which counteracting effects on the heat dissipation within a drive. ...

Keywords: Disk drive, technology scaling, thermal management